Remarks

Claims 1-17 are pending in the application. Applicants thank the Examiner for extending to the undersigned attorney the courtesy of a telephonic interview on August 1, 2006. The interview involved the showing that might be required to compare jet milling and wet milling. Applicants provide such a showing below.

Rejection of Claims 1-17 Under 35 U.S.C. §103

Claims 1-17 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. US 2003/0027048 A1 to Lu et al., on grounds *inter alia* that:

"The Lu et al. publication in paragraph no. 0003 describes a cathode composition for a lithium ion battery of the general formula: $Li[M^1_{(1-x)}Mn_x]O_2$ *where* $0<x<1$ *and* M^1 *represents one or more metals other than chromium (examples of suitable metals include Ni, Co, Fe, Cu, Li, Zn, V and combinations thereof: please see paragraph no. 0024). The composition is in the form of a single phase having an* O_3 *crystal structure. The Lu et al. publication is also directed to lithium ion batteries incorporating these cathode compositions in combination with an anode and an electrolyte.*

"Paragraph no. 0023 sets forth that the cathode composition may be synthesized by jet milling or by combining precursors of the metal elements (e. g. hydroxides, nitrates and the like), followed by heating at temperatures of at least 600 °C.

"The difference between the applicants' claims and this Lu et al. publication is that Lu et al, broadly discloses that M may be at least one selected from Ni, Co, Fe, Cu, Li, Zn, V and combinations thereof whereas the applicants' claims call for M to be both Ni and Co, however it is submitted that this difference would have been obvious to one of ordinary skill in the art at the time the invention was made because the courts have already determined that such selection of a particular member out of a prior art reference's group of members is prima facie obvious: please see the

discussion of the In re Petering 301 F.2d 676,681,133 USPQ 275,280 (CCPA 1962) court decision set forth in section 2144.08(II)(A)(4)(a) in the MPEP 8th Ed, Rev. 3, Aug. 2005." (see the Final Rejection at pages 3-4).

and on the further grounds that:

"a) *The applicants argue that Lu et al. uses co-precipitation of mixed metal nitrates and metal hydroxides to make single-phase four metal cathode compounds in their Examples 19 and 20. Applicants' Examples 1 and 2 show the use of wet milling to obtain single-phase four metal cathode compounds.*

"The applicants' argument is not accompanied with any evidence establishing that there is a patentable difference between the "wet milling" of applicants' claim 1 and the "jet milling" set forth in paragraph no. 0023 in U.S. Patent Application Publication No. US 2003/0027048 A1 - hence, the 35USC103 rejection is maintained.

"b) The applicants argue that their Comparison Example 1 shows that when the Example 1 starting powders were dry milled, a compound exhibiting at least two phases by powder x-ray diffraction analysis was obtained. Applicants' Comparison Example 2 shows that a single phase four metal compound like that prepared in applicants' Example 1 could be made by co-precipitation of mixed metal nitrates and metal hydroxides, but that doing so required lengthy washing and drying steps which were not needed in Example 1 and Example 2.

"The applicants' argument is not accompanied with any evidence establishing that there is a patentable difference between the "wet milling" of applicants' claim 1 and the "jet milling" set forth in paragraph no. 0023 in U.S. Patent Application Publication No. US 2003/0027048 A1 - hence, the 35USC103 rejection is maintained." (see the Final Rejection at pages 4-5).

Reconsideration is requested. The accompanying SIDS provides PDF copies of an article entitled "How Jet Mills Operate" as it appeared on October 13, 2002 (obtained from the Internet Archive website at http://web.archive.org/web/20021013015854/http://www.jetpul.com/mequip/milloper.htm), and of U.S. Patent No. 5,992,773 (Schwechten). The article explains that pulverization takes place in the central chamber of a jet mill as the processed material:

"is driven at near sonic velocity around the perimeter of the toroidal chamber by multiple jets of air or steam." (see page 1 of the enclosed PDF copy)

The article also compares jet milling to milling "through a standard fluid-energy mill" and says that:

"In fact, the final product from a Micron-Master jet pulverizer is comparable to products that have been run through a standard fluid-energy mill twice. Moreover, a Micron-Master mill is 20% more energy efficient than a conventional fluid-energy design and they save even more on energy costs in that the process does not require refrigeration to remove heat, a common by-product of other mills." (see page 3 of the enclosed PDF copy).

Schwechten explains that in a fluidized-bed jet-mill pulverization method:

"a high-velocity gas or vapor jet exiting from a nozzle is directed at a fluidized bed of granular material" (see e.g., col. 1, lines 6-9).

If asked to consider the matter, a person having ordinary skill in the art would conclude that unless specifically said to be carried out using wet milling conditions, "jet milling" is different from fluid-energy milling; that jet milling employs a gas, steam or vapor to pulverize the processed material; and that jet milling is not "wet milling" as recited in Applicants' rejected claims 1-17.

Applicants accordingly request withdrawal of the 35 U.S.C. §103(a) rejection of claims 1-17 as being unpatentable over Lu et al. If the above showing is not deemed sufficient to result in allowance, Applicants also request an in-person interview with the Examiner to discuss what further evidence or data might need to be submitted.

CONCLUSION

Applicants have made an earnest effort to resolve all issues and to place the application in condition for allowance. The Examiner is encouraged to call the undersigned attorney if there are any questions or suggestions regarding this Response or the application.

Respectfully submitted on behalf of
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